

REMARKS

This Amendment is responsive to the Office Action identified above, and is further responsive in any other manner indicated below.

RCE FILED TO AVOID PROSECUTION DELAYS

In view of the significant features/limitations of the amended and/or added claims being inappropriate (i.e., deniable) for entry after final rejection in that such would require significant further search and/or consideration, the present RCE was filed to avoid Advisory Action delay and to gain immediate entry/consideration of such feature/limitations. In view of the significant features/limitations of the amended and/or added claims, it is respectfully submitted that it would NOT BE PROPER to make a FIRST ACTION FINAL within the present RCE.

PENDING CLAIMS

Claims 1-18 and 47-49 were pending, under consideration and subject to examination in the Office Action. Appropriate claims have been amended, canceled and/or added (without prejudice or disclaimer) in order to adjust a clarity and/or focus of Applicant's claimed invention. That is, such changes are unrelated to any prior art or scope adjustment and are simply refocused claims in which Applicant is present interested. At entry of this paper, Claims 1-18 and 47-55 will be pending for further consideration and examination in the application.

REJECTION UNDER 35 USC '103

All 35 USC '103 rejections are respectfully traversed. All descriptions of Applicant's disclosed and claimed invention, and all descriptions and rebuttal arguments regarding the applied prior art, as previously submitted by Applicant in any form, are repeated and incorporated hereat by reference. Further, all Office Action statements regarding the prior art rejections are respectfully traversed. As additional arguments, Applicant respectfully submits the following remarks in support of traversal of the rejection and patentability of Applicant's clarified claims.

In the present invention, a master key generation unit generates a key by receiving both of the first and second key information. Namely the key is generated with the two key information; with the first key information being **recorder-specific key information**, and the second key information being another (e.g., non-recorder-specific) key information. That is, independent claims 1, 7 and 49 recite: "**first key information generation unit to generate at least one item of first key information which is recorder-specific key information**". Further, added dependent claims 50, 52 and 54 further specify "wherein said first key information is recorder-specific key information, **in that** said first key information **is derived from an attribute of said digital signal recorder**", while added dependent claims even further specify "wherein said first key information is recorder-specific key information, **in that** said first key information **is derived from an attribute of said digital signal recorder, and is unrelated to any attribute of any part of said removable recording medium unit.**"

As another feature, for enhanced security purposes (i.e., to thwart unauthorized decrypting), **the first key information is not recorded onto the**

removable recording medium unit, i.e., just the second key information is recorded. (See Fig. 8 and corresponding description in the specification.) In terms of distinguishing claim limitations, clarified independent claims 1 and 7 now recite: "recording a digital signal on a removable recording medium unit including a recording medium, ...wherein said first key information as said recorder-specific key information, is not recorded on any part of said removable recording medium unit".

It is possible to realize high security by using the first and the second key information for encrypting, because it makes difficult to infer the missing recorder-specific key from the recorded information (e.g., at another recorder attempting to reproduce the copy-protected recording medium unit), as the first key information is not recorded onto the removable recording medium unit. That is, if a recording is made on a specific recorder, and then is attempted to be reproduced on a differing recorder (or player), reproduction will fail because the differing recorder (or player) will not be privy to the first (recorder-specific) key information.

Thus, Applicant's invention is advantageous in providing another level of security/copy-protection, in that its recorder-specific key information allows recorder-specific copies to be made.

Turning now to rebuttal of the applied references, Office Action comments allege that portions of Chou (e.g., col. 6, lines 17 - col. 7, line 5) teaches Applicant's first (recorder-specific) key information. Strong traversal is appropriate, because Chou fails as a reference in that Chou teaches away from Applicant's invention in that Chou's (Examiner alleged) "recorder-specific" key is stored in Chou's recording

medium. Further traversal is appropriate, because Chou's keys are not "recorder-specific", and instead are derived from non-recorder items (e.g., noise and/or a recording medium). The very fact that Chou's key is derived from transient noise, or is derived from some characteristic of a removable recording medium unit, **is strong evidence that Chou's key is NOT RECORDER-SPECIFIC, as Chou's key relates to transient items, not fixed items or attributes/characteristics of the recorder.**

Accordingly, in the context of Applicant's claims, **Chou's disclosure nowhere discloses (or suggests) any type of recorder-specific key information** which is **not recorded onto the removable recording medium unit**. In fact, Chou's keys are specific to a "noise sample" and/or to a "digital video disk", and are recorded (see Chou's FIGS. 2 and 4 and col. 6, lines 28-30) onto Chou's non-volatile memory 8 of the transponder 2 of the optical disk carrier 2, **i.e., are recorded onto Chou's removable recording medium unit**. Chou's col. 1, lines 60-64, for example, states:

...The encryption process uses **a key generated from the sample of noise signal** which was combined with the original video data. The key derived from the sampled noise is further encrypted with **a encryption key Kx specific to the digital video disk**.

As additional examples, attention is directed to Chou's col. 8, lines 19-22, and Chou's abstract. In short, none of Chou's keys are recorder-specific keys which are not stored on the removable recording medium unit. In short, even if one were to assume that Chou's key is "recorder-specific", **Chou teaches contrary to Applicant's invention, in that, Chou's key IS RECORDED ONTO CHOU'S REMOVABLE RECORDING MEDIUM UNIT**. That is, Chou's key is recorded onto non-volatile memory 8 (see Chou's FIG. 4) as a part of Chou's transponder

microcircuit 3 which itself is a part of Chou's removable recording medium unit 1 (i.e., disk or video cassette).

Regarding the other applied references, none of such references cure the major deficiency mentioned above with respect to the primary Chou reference. Accordingly, it is respectfully submitted that no combination of the applied references would have disclosed, or suggested, Applicant's claimed invention.

Office Action comments now cite Shear et al. and state: "Shear teaches a system similar to the system of Chou, where key encrypting keys are stored on a recording medium, alternatively the keys can be stored in the content player (See Shear Paragraphs 0218-0219). It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of shear in the recording/playback device of Chou and Wonfor by storing the secret deciphering key in a secure memory of the optical disk player. This would have been obvious because the ordinary person skilled in the art would have been motivated to restrict playback to only those devices which contain the correct deciphering key." The Office Action arguments/logic is deficient in at least several regards regarding Applicant's claims.

More particularly, Chou et al. teaches recording keys onto the recording medium, while Shear (allegedly, according to Office Action comments) teaches recording keys onto the recording medium or alternatively in the content player. It is respectfully submitted that such situation would tend more toward teaching recording the keys onto the recording medium, i.e., both references commonly teach that the keys may be recorded onto the recording medium. There is no suggestion

or motivation provided by the references themselves, to suddenly prefer recording the keys within the content player.

Even assuming arguendo that the Chou et al./Shear et al. combination does somehow provide motivation to prefer recording the keys within the content player, such still does not teach Applicant's disclosed and claimed invention. More particularly, it is respectfully noted that Applicant's disclosed and claimed invention teaches storing a portion of the keys onto the recording medium, i.e., independent claim 1, for example, recites: "a recording circuit which records, onto said removable recording medium unit, at least one of said at least one item of second key information generated by said second key information generation unit". The Chou et al./Shear et al. combination (using the Office Action reasoning) would record such "second key" within the content player. Accordingly, again, it is respectfully submitted that the Office Action cited reference combinations tend to teach AWAY from Applicant's disclosed and claimed invention.

Regarding independent claim 49, such independent claim substantially parallels independent claim 1, with the exception of claim 49's last paragraph alternatively reciting: "wherein a copy of said first key information as said recorder-specific key information, is not carried together with any part of said removable recording medium unit." Again, if one were to assume that Chou's key is "recorder-specific", Chou teaches contrary to Applicant's invention, in that Chou's key IS CARRIED WITH (i.e., AS A PART OF) CHOU'S REMOVABLE RECORDING MEDIUM UNIT. That is, Chou's key is recorded onto non-volatile memory 8 (see Chou's FIG. 4) as a part of Chou's transponder microcircuit 3 which

itself is carried as a part of Chou's removable recording medium unit 1 (i.e., disk or video cassette).

In addition to the foregoing, the following additional remarks from Applicant's foreign representative are also submitted in support of traversal of the rejection and patentability of Applicant's claims.

In Applicant's invention, transmission data and a recorded data adopt different encryption methods from one another. Therefore, Applicant's invention can be used to build a more powerful coding system. In this point, there is no disclosure in any of the cited references.

As a result of all of the foregoing, it is respectfully submitted that the applied art (taken alone and in the Office Action combinations) would not support a '103 obviousness-type rejection of Applicant's claims. Accordingly, reconsideration and withdrawal of such '103 rejection, and express written allowance of all of the '103 rejected claims, are respectfully requested.

EXAMINER INVITED TO TELEPHONE

The Examiner is herein invited to telephone the undersigned attorneys at the local Washington, D.C. area telephone number of 703/312-6600 for discussing any Examiner's Amendments or other suggested actions for accelerating prosecution and moving the present application to allowance.

RESERVATION OF RIGHTS

It is respectfully submitted that any and all claim amendments and/or cancellations submitted within this paper and throughout prosecution of the present

application are without prejudice or disclaimer. That is, any above statements, or any present amendment or cancellation of claims (all made without prejudice or disclaimer), should not be taken as an indication or admission that any objection/rejection was valid, or as a disclaimer of any scope or subject matter. Applicant respectfully reserves all rights to file subsequent related application(s) (including reissue applications) directed to any/all previously claimed limitations/features which have been subsequently amended or cancelled, or to any/all limitations/features not yet claimed, i.e., Applicant continues (indefinitely) to maintain no intention or desire to dedicate or surrender any limitations/features of subject matter of the present application to the public.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant respectfully submits that the claims listed above as presently being under consideration in the application are now in condition for allowance.

To the extent necessary, Applicant petitions for an extension of time under 37 CFR 1.136. Authorization is herein given to charge any shortage in the fees, including extension of time fees and excess claim fees, to Deposit Account No. 01-2135 (Case No. 501.40474X00) and please credit any excess fees to such deposit account.

Based upon all of the foregoing, allowance of all presently-pending claims is respectfully requested.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

/Paul J. Skwierawski/
Paul J. Skwierawski
Registration No. 32,173

PJS/slk
(703) 312-6600